

### Abstract

Microresonators, such as a microsphere resonators and planar microresonators, are optically coupled to waveguides for input and output of light. It is important that the relative positions of the microresonator and the waveguide are maintained stable, while still maintaining high cavity Q and ease of launching and extracting the optical beams. Structures are provided on a substrate that are useful for maintaining the position of the microresonator relative to the waveguide. The structures provide for vertical or horizontal coupling between the waveguide and the microresonator.